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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Christian Hogl et al.	Examiner: Hyung Sough
Serial No.:	10/018,237	Group Art Unit: 2661
Filed:	June 24, 2002	Docket: 2043.184US1
Title:	METHOD FOR TRANSMITTING A CODE	

PETITION TO MAKE SPECIAL UNDER 37 CFR 1.102(d)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicants hereby petition the Commissioner to advance the above-identified Application out of turn for accelerated examination under the provisions of 37 C.F.R. 1.102(d).

The Application meets the requirements of M.P.E.P. §708.02, section VIII. The Application is a new application, not yet having received any examination. Applicants believe that all of the claims are directed to a single invention; however, if the Office shall determine that they do not obviously encompass only a single invention, Applicants agree to make a telephone election without traverse. An enclosed Statement avers that a pre-examination search has been carried out, lists the field of the search, and discusses the relevant references, pointing out how the claimed subject matter is patentable over these references with the particularity required by 37 C.F.R. 1.111(b) and (c).

Please charge Deposit Account No. 19-0743 for the petition fee of $130.00 as set forth in § 1.17(h), which is required pursuant to 37 C.F.R. § 1.102(d).

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If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

CHRISTIAN HOGL ET AL.

By their Representatives,

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Date May 31, 2006 By

Elena B. Dreszer
Reg. No. 55,128

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 31 day of May, 2006

Peter Rabuffoni
Name

Signature

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STATEMENT IN SUPPORT OF PETITION TO MAKE SPECIAL UNDER 37 CFR 1.102(d)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicants respectfully submit the following statement in support of the accompanying Petition to Make Special Under 37 CFR 1.102(d).

FEE

The fee of $130.00 as required by 37 CFR 1.17(h) is enclosed. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

CLAIMS

All claims in this application are directed to a single invention.

If the Office determines that all the claims presented are not obviously directed to a single invention, Applicants will make an election without traverse as a prerequisite to the grant of special status.

SEARCH

A search was made by:

[ ] the inventor

[ ] attorney or agent

[ ] professional searcher

[ ] foreign patent office

[X] EPO as ISA for PCT/EP00/05359

The field of search included:

[X] classes/subclasses: G07F 19/00

[ ] publications ?

[ ] foreign patents ?

COPIES OF REFERENCES

Attached are two documents deemed by the EPO, as ISA, to be of particular relevance. These documents include Semmakie (WO9908242) and Rogers (US 5,870,456). The International Search Report (ISR), issued by the ISA, has classified the above documents as relevant to a showing that the claimed invention cannot be considered to involve an inventive step when each of the documents is taken alone. Also attached is Form PCT/ISA/210.

DETAILED DISCUSSION OF THE REFERENCES

The references identified in the International Search Report (ISR) fail to establish a prima facie case of lack of novelty or obviousness because the references, individually or in combination, neither teach nor suggest all the claim elements and limitations required by the patent application. Therefore, Applicants believe all pending claims are allowable over these references.

A description of the invention is presented and followed by a detailed discussion of each of the documents as cited by the ISR with a discussion regarding how the claimed subject matter is patentable over the documents in combination.

Patent Application

A discussion of claim 1 follows. The other independent claim, claim 12, is distinguishable over the prior art for reasons similar to these set out below.

Claim 1 requires:

A method comprising:

receiving financial account identifier information of a user at a code allocation

unit;

generating an access code for the user, the access code being to identify the user to a business entity; and

from the code allocation unit, effecting a value transfer utilizing the financial account identifier and the access code, the access code being reflected in an amount of value associated with the value transfer so as to be transmitted to the user together with a receipt for the value transfer.

Rogers (US 5,870,456)

Rogers describes a method and apparatus for processing payment transactions using debit card numbers without the requirement of a personal identification number (PIN) (Rogers, Abstract). In Rogers, a user is permitted to pay bills via a telephone connectable to at least one remote debit card network via a telepay system.

Specifically, Rogers discloses the method as follows.

1. A caller is prompted to enter an access code identifying a current payment transaction using a keypad of a telephone.
2. The telepay system determines whether the entered access code is valid and prompts the caller to enter an account number.
3. If the entered account number is valid, the caller is prompted to enter the caller's debit card number and the payment amount.
4. The telepay system then accesses a remote debit card network associated with the debit card number and deducts the entered payment amount from the account.
5. The telepay system informs the caller of an approval code issued by the remote debit card network and stores the caller's access code, account number, debit card number and payment amount in a transaction log file.

(Rogers, 2: 55 – 3: 31.)

Thus, in Rogers, the caller provides to the telepay system existing information, such as the existing caller's access code, the existing caller's account number and the existing caller's debit card number.

Rogers further elaborates on the access code that the caller must enter in order to use the telepay system. The access code identifies the payee (the caller) within the telepay system and is required in order to utilize the telepay system service. The access code in Rogers is typically printed on the bottom of the statement in an obvious manner. (Rogers, 5: 7-26.)

Thus, Rogers discloses *requiring the caller to provide an existing access code in order to use the telepay system.* In contrast, claim 1 recites "generating an access code ..., the access code being to identify the user to a business entity."

Rogers explains that the caller can find out the access code from the printed statement. Rogers is silent with regard to how such access code is generated or included on the printed statement. In contrast, claim 1 recites "the access code being reflected in an amount of value associated with the value transfer."

For at least this reason, claim 1 of the present application is patentable over Rogers and should be allowed.

Semmakie (WO9908242)

Semmakie describes a method of providing a transaction record relating to the retrieval of information by a client computer from a server computer. (Semmakie, page 1.)

Specifically, Semmakie discloses the method as follows.

1. The client computer (client) dials into the point of presence and requests that the telephone charges for the connection to the telephone network are made against a telephone number, which may be the same as or different from the telephone number for the line which is connected to the client computer.
2. If the client computer does not have its own dedicated Internet address, the point of presence allocates an Internet address to the client.
3. The point of presence transmits the Internet address and the calling line identifier (CLI) that corresponds to the telephone number to the transaction record generator.
4. When the client retrieves a Web page from an Internet server, the Internet server generates an initial transaction record and transmits it to the transaction record generator. The initial transaction record contains the Internet address allocated to the client and the

amount of the credit payment. The initial transaction record may also contain a description of the page which is retrieved for insertion onto the user's telephone account.

5. The transaction record generator receives the Internet address and verifies that that the Internet address is valid for credit payment and converts the Internet address associated with the credit payment into the CLI.

6. The transaction record generator generates a client transaction record containing the CLI for the client computer and the credit amount and transmits the client transaction record to the telephone service billing system. The telephone service billing system can then integrate the credit payment into the user's telephone account.

7. The transaction record generator generates an information provider transaction record, which contains the name of the information provider and the amount of the credit payment to be made against the user's telephone account. The information provider transaction record is transmitted to the information provider billing system. The billing system can then integrate the credit payment into the account for the information provider.

(Semmakie, pages 8-12 and Figure 2.)

Thus, Semmakie discloses generating a client transaction record and an information provider transaction record and transmitting the generated transaction records to their respective destinations. Semmakie fails to disclose or suggest "generating an access code" in general or "the access code being reflected in an amount of value associated with the value transfer" in particular.

Semmakie further explains that as a security measure, where a user wishes to retrieve a Web page for which his telephone account is debited, the user *registers both his calling line identifier and his password with the transaction record generator.* Thus, in one embodiment, the technique disclosed in Semmakie relies on the existing password and the existing CLI, provided by the user to the transaction record generator, as opposed to generating an access code ..., the access code being to identify the user to a business entity," as recited in claim 1.

For at least the above reasons, claim 1 of the present application is patentable over Semmakie and should be allowed.

Rogers and Semmakie combination

As discussed above, Rogers describes a method and apparatus for processing payment transactions using debit card numbers without the requirement of a personal identification number (Rogers, Abstract) and Semmakie describes a method of providing a transaction record relating to the retrieval of information by a client computer from a server computer (Semmakie, page 1). Neither Rogers nor Semmakie, whether considered separately or in combination, disclose or suggest "generating an access code ... the access code being reflected in an amount of value associated with the value transfer," as recited in claim 1. Therefore, claim 1 is patentable in view of the combination of Rogers and Semmakie.

Dependent claims

As dependent claims are deemed to include all limitation of the base claim, dependent claims of the present application are patentable in view of Semmakie and Rogers, for at least the reasons articulated above.

CONCLUSION

In view of the above remarks, the application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the application, the Examiner is invited to call the undersigned attorney at (408) 278-4052.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Name Peter Rebustori _____ Signature _____

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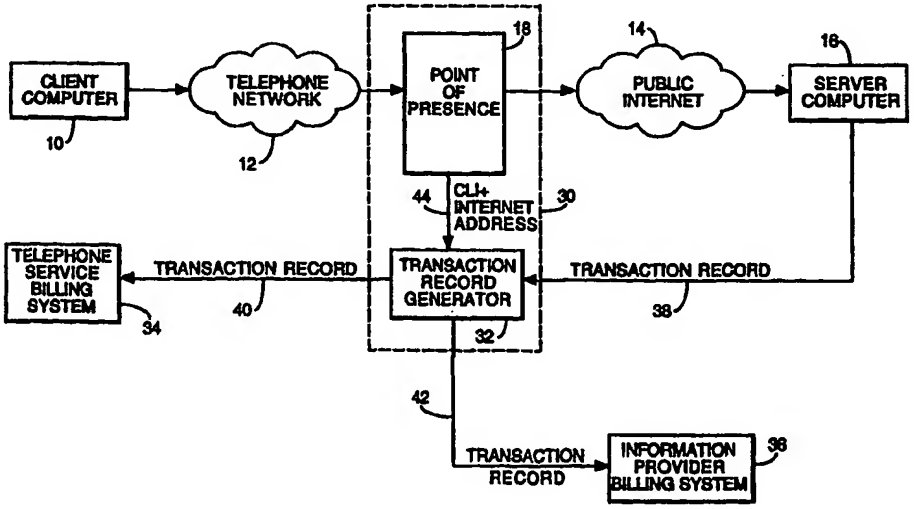

(57) Abstract

A client computer (10) may be connected to the public Internet (14) through a telephone network (12) and a point of presence (18). The client computer (10) can retrieve Web pages from a server computer (16) connected to the public Internet (14). Where a Web page is retrieved for which the telephone account of the user of client computer (10) is to be credited or debited, the server computer (16) transmits a transaction record to a transaction record generator (32). This transaction record specifies the credit or debit amount. The transaction record generator (32) then transmits a further transaction record to a telephone service billing system (34) for the telephone account of the user of the client computer (10). This transaction record specifies the credit or debit amount and the calling line identifier for the client computer (10). The transaction record generator (32) also transmits a transaction record to an information provider billing system. This transaction record specifies the credit or debit amount and the name ofthe information provider.

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PROVIDING A TRANSACTION RECORD

This invention relates to a method of providing a transaction record relating to the retrieval of information by a client computer from a server computer and also to a system for providing such a transaction record.

The most widespread data network is at present the well known public Internet. Client computers operated by members of a large organisation are typically connected to a local network which in turn is connected to the Internet. However, client computers operated by individuals from their homes or individuals belonging to a small organisation are usually connected to the Internet by a dial-up connection through a public telephone network to an interface known as a point of presence between the public telephone network and the public Internet.

When a client computer is connected to the Internet, it may be used to retrieve information from server computers also connected to the Internet. Typically, such information is retrieved without a credit or debit payment.

However, where a client computer is connected to the Internet through a dial-up connection, normal telephony charges are incurred while the connection is maintained. Consequently, the user of the client computer may be deterred from retrieving information. In contrast, in some situations, an information provider may want to encourage users to retrieve information.

Some information providers require payment for supplying information stored on a server computer connected to the Internet to a client computer. Unfortunately, the methods which are presently available for charging for the supply of such information are fragmented and difficult for users to understand.

According to one aspect of this invention, there is provided a method of providing a transaction record relating to the retrieval of information by a client computer connected to a telephone network from a server computer connected to a data network, said method comprising the steps of:

providing a connection between the client computer and the data network;

said client computer having a telephone network identifier and a data network address;

receiving credit or debit details from the server computer relating to said retrieval of information by the client computer from the server computer; and

generating a client transaction record relating to said retrieval of information by the client computer from the server computer, said client transaction record containing credit or debit details and said telephone network identifier.

The invention thus enables credit or debit payments for retrieving information via the Internet or other data network to be integrated on to a user's normal telephone bill.

According to another aspect of this invention there is provided a system for providing a transaction record relating to the retrieval of information by a client computer connected to a telephone network and having a telephone network identifier from a server computer connected to a data network, said system comprising:

an interface for providing a connection between a client computer connected to the telephone network and the data network; and

a transaction record generator arranged to:

receive credit or debit details from a server computer connected to the data network relating to the retrieval of information by a client computer connected to the telephone network from the server computer; and

generate a transaction record relating to said retrieval of information by said client computer from said server computer and containing credit or debit details and a telephone network identifier.

According to a further aspect of the invention, there is provided a method of providing a transaction record relating to the retrieval of information by a client computer connected to a telephone network from a server computer connected to a data network, said method comprising the steps of:

providing a connection between the client computer and the data network;

said client computer having a telephone network identifier and a data network address; and

generating a client transaction record relating to said retrieval of information by the client computer from the server computer, said client transaction record containing credit or debit details and said telephone network identifier.

According to a still further aspect of this invention, there is provided a system for providing a transaction record relating to the retrieval of information by

a client computer connected to a telephone network and having a telephone network identifier from a server computer connected to a data network, said system comprising:

an interface for providing a connection between a client computer connected to the telephone network and the data network; and

a server computer connected to the data network, said server computer being arranged to:

generate a transaction record relating to retrieval of information by a client computer from said server computer and containing credit or debit details and a telephone network identifier.

This invention will now be described in more detail, by way of example, with reference to the drawings in which:

Figure 1 is a block diagram showing how a client computer may be connected to a server computer through a telephone network and the public Internet and a system for providing a transaction record for the retrieval of information by the client computer from the server computer and embodying this invention;

Figure 2 is a flow chart of the operations performed by the system of Figure 1 in providing a transaction record for a credit amount;

Figure 3 is a flow chart showing the operations which are performed by the system of Figure 1 in providing a transaction record for a debit amount; and

Figure 4 is a block diagram corresponding generally to the block diagram of Figure 1 but with a modification to the system for providing a transaction record.

Referring now to Figure 1, there is shown how a client computer 10 may be connected through a public telephone network 12 and the public Internet 14 to a server computer 16 connected to the public Internet 14. The server computer 16 is one of a very large number of server computers connected to the public Internet 14.

The client computer 10 is connected to the public telephone network 12. In order to connect the client computer 10 to the public Internet 14, the user of the client computer 10 instructs it to dial the telephone number of an interface 18 known as a point of presence.

The point of presence 18 belongs to an Internet access provider and typically a particular Internet access provider will own a set of points of presence distributed over a particular geographical area. It is usually possible to connect a client computer to a point of presence which is connected to the same local network as the client computer. However, it can also happen that a client computer is connected to a point of presence outside its own local network. In such circumstances, the client computer may be connected through two or more public telephone networks owned by different organisations. For example, the client computer 10 could be connected to one local network owned by a first organisation, the point of presence could be connected to another local network owned by a second organisation and the two local networks could be connected by a trunk network owned by a third organisation.

The point of presence 18 is connected to the public Internet 14 and is arranged to provide a connection between a telephone line in the telephone network 12 and the public Internet 14. Where a client computer transmits and receives data as an analogue signal generated by a modem, the point of presence 18 provides conversion between the analogue signal used by the client computer and the digital signal used in the public Internet 14.

The client computer 10 may be used to retrieve information pages stored on the server computer 16. Several protocols are established for retrieving information pages and these include the File Transfer Protocol, Java Script and the very well known Hypertext Transfer Protocol. Pages which are transmitted using the Hypertext Transfer Protocol are stored using the well known Hypertext Markup Language. In order to retrieve such pages, the client computer needs a suitable browser program such as the well known Netscape browser. The combination of the public Internet 14 and server computers connected to it from which information pages may be retrieved is known as the World Wide Web. Information pages which may be retrieved from such server computers are commonly known as Web pages.

The information Web pages stored on server computer 16 are supplied by one or more information providers. They may be supplied by a single information provider who also owns the server computer 16. Alternatively, the server computer 16 may be owned by one organisation which permits one or more information providers to store Web pages on its server computer.

The arrangement described above for connecting the client computer 10 through the telephone network 12, the point of presence 18 and the public Internet 14 to the server computer 16 is of course well known. Usually, when a client computer retrieves a Web page from a server computer, there is no associated financial transaction between the user of the client computer and the information provider of the Web page. It has been identified that there are situations where this is unsatisfactory.

Firstly, while a client computer is connected to a point of presence, telephony charges are incurred. Such charges can have a deterrent effect on the user of the client computer. In contrast, in some situations, the information provider may want to encourage users to retrieve a Web page. Examples of situations where information providers may want to encourage users to retrieve a Web page include Web pages containing advertising material and Web pages which act as an on-line service desk. It has been identified that one way to encourage users to retrieve Web pages is to make credit payments which compensate for the telephony charges. In order to provide a positive incentive to users to retrieve Web pages, said payments could exceed the telephony charges.

Secondly, some information providers require payment for retrieval of their Web pages. Although various methods do exist for debiting users for retrieval of Web pages, these methods are presently fragmented and difficult for users to understand.

The arrangement shown in Figure 1 includes a system for providing a transaction record when a Web page is retrieved. As will be explained in more detail below, the transaction record generated using this system may be used either to credit or debit a user's telephone account when a Web page is retrieved. This system together with two associated billing systems will now be described. This will be followed by a description of the operations which are performed by the system in order to generate a transaction record for crediting a user's telephone account when the user retrieves a Web page and then a description of the operations which are performed in order to debit a user's telephone account when the user retrieves a Web page.

Referring now back to Figure 1, the system for generating a transaction record is indicated by reference numeral 30 and comprises the point of presence 18 and a transaction record generator 32. The point of presence 18 is essentially

a computer provided with the functionality described above together with the additional functionality described below. The transaction record generator 32 has the functionality which will be described below with reference to Figures 2 and 3. The transaction record generator may be implemented either by providing additional software for the point of presence 18 or as a separate computer provided with appropriate software. The server computer 16 requires additional functionality as described below.

Data can be transmitted between the transaction record generator 32 and the server computer 16, between the transaction record generator 32 and a telephone service billing system 34, and between the transaction record generator 32 and an information provider billing system 36, respectively, through communications links 38, 40 and 42. Where the point of presence 18 and the transaction record generator 32 are separate computers, they are connected, as shown in Figure 1, by a communications link 44.

Where the telephone network 12 between the client computer 10 and the point of presence 18 takes the form of a single public telephone network owned by a single organisation, the telephone service billing system 34 is the billing system for that single public telephone network. Where the telephone network 12 takes the form of two or more public telephone networks, then the telephone service billing system 34 is a billing system associated with one of these networks. In either event, the telephone service billing system 34 is capable of billing a telephone account for the user of client computer 10. Although Figure 1 shows only a single telephone service billing system, it could easily be arranged that the transaction record generator sends transaction records to more than one telephone service billing system and thus arranges for debiting or crediting the telephone accounts of the users of more than one telephone network.

The information provider billing system 36 is arranged to debit or credit accounts for a set of information providers, including the information provider or providers for the Web pages stored on the computer 16.

The construction of billing systems is well known and so the construction of billing systems 34 and 36 will not be described in further detail.

Referring now to Figure 2, they will be described the series of operations which occur when a client computer logs on to the point of presence 18, retrieves a Web page for which a credit payment is made to the user, and eventually logs

off. During this series of operations, three transaction records are generated. The first is generated by the server computer 16 and transmitted to the transaction record generator 32 , the second transaction record is generated by the transaction record generator 32 and transmitted to the telephone service billing system 34 and the third transaction record is also generated by the transaction generator 32 but transmitted to the information provider billing system 36. In order to distinguish between these three types of transaction records, a transaction record generated by the server computer 16 will be referred to as an initial transaction record, a transaction record generated by the transaction record generator 32 and transmitted to the telephone service billing system 34 will be referred to as a client transaction record, and a transaction record generated by the transaction record generator 32 and transmitted to the information provider billing 36 will be referred to as an information provider transaction record.

Initially, in a step 50, the user causes a client computer 10 to dial the telephone number of the point of presence 18 and a connection is then formed between the client computer 10 and the point of presence 18. The point of presence 18 then sends a message to the client computer 10 requesting the user's identifier and a password. The user then enters the user's identifier and password on computer 10 and these are transmitted to the point of presence 18. If these are valid, the point of presence 18 allows the computer 10 to log on to the point of presence 18.

In the example shown in Figure 1, the client computer 10 does not have its own dedicated Internet address. Consequently, in step 51, the point of presence 18 allocates an Internet address to the client computer 10. This Internet address is taken from a set of Internet addresses supplied to the point of presence 18 for allocation to client computers.

In a step 52, the point of presence 18 transmits the Internet address allocated to client computer 10, the calling line identifier (CLI) for the telephone line to which the client computer is connected and the log on time to the transaction record generator 32. In the transaction record generator 32, the CLI and log on time are stored against the Internet address. The CLI for the telephone line to which the client computer 10 is connected corresponds to the telephone number for this line.

By way of modification, when the client computer 10 dials the point of presence 18, it may request that the telephone charges for the connection to the telephone network are made against a telephone number different from the telephone number for the line which is connected to the client computer 10. In this case, the CLI transmitted to the transaction generator 32 corresponds to this other telephone number.

After step 52, in a step 53 the client computer 10 retrieves a Web page from the Internet server 16. As this Web page is one for which a credit payment is made to the user, in a step 54 the server computer 16 generates an initial transaction record. This transaction record contains the Internet address allocated to the client computer 10 and the amount of the credit payment. It may also contain a description of the page which is retrieved for insertion onto the user's telephone account. Still in step 54, the server computer 16 transmits the initial transaction record to the transaction record generator 32.

Next, in a step 55, the transaction record generator 32 checks if the Internet address is valid for a credit payment. In order to do this, it checks whether the client computer to which the Internet address is allocated is still logged on.

Assuming that the Internet address is valid, in a step 56, the transaction record generator 32 converts the Internet address to the calling line identifier. Then, in a step 57, the transaction record generator generates a client transaction record. This contains the calling line identifier for the client computer and the credit amount. It may also contain a description of the Web page which has been retrieved for insertion onto the user's telephone account.

Then, in a step 58, the transaction record generator transmits this client transaction record to the telephone service billing system 34. The telephone service billing system can then integrate the credit payment into the user's telephone account.

Next, in a step 59, the transaction record generator generates an information provider transaction record. This contains the name of the information provider and the amount of the credit payment to be made against the user's telephone account. Where the server computer 16 stores Web pages for only a single information provider, the name of the information provider can be stored in the transaction generator 32 against the Internet address for the server computer

16. However, if the server computer 16 stores pages for more than one information provider, then it is necessary for the name of this information provider to be included in the initial transaction record generated by the server computer 16.

Next, in a step 60, the transaction record generator 32 transmits the information provider transaction record to the information provider billing system 36. The billing system 36 can then integrate the credit payment into the account for the information provider. In the case of the information provider, the credit amount is of course debited to the account for the information provider.

Next, in a step 61, the client computer logs off and, in a step 62, the point of presence transmits the Internet address allocated to client computer 10 and the log off time to the transaction record generator 32. For reasons of simplicity Figure 2 shows the retrieval of only a single Web page for which a credit payment is made. In a real situation, the client computer 10 will be used to retrieve many Web pages between logging on and logging off the point of presence 18. For each Web page for which a credit payment is made, steps 53 to 60 are performed. For each Web page for the user's telephone account is debited, steps 73 to 84 described below with reference to Figure 3 are performed.

In order to encourage users of client computers to retrieve Web pages, the credit payment for retrieving each page is set to a value which corresponds approximately to the telephone charges which are incurred whilst the page is being retrieved. Alternatively, as mentioned above, in order to provide users with a positive incentive to retrieve a Web page, the credit payment can be set to a value which exceeds the telephone charges which are incurred while retrieving the page.

In a modification, a calculation is made of the time which is spent in retrieving a Web page for which a credit payment is made and the credit payment is set to the telephony charges for this time period. This modification will now be described.

With this modification, each time the client computer 10 retrieves a Web page from server computer 16, the point of presence 18 transmits the time of retrieval and an identifier, for example the Universal Resource Locator, for the page retrieved. When a page is retrieved for which a credit payment is made , the initial transaction record contains an indication that the credit payment is to be set equal

to the telephony charge for the time spent retrieving the page rather than specifying a credit amount.

In step 57, in order to calculate the credit payment, the transaction record generator 52 determines the time which has elapsed between retrieving a Web page for which a credit payment is to be made and the next Web page retrieved by the client computer 10. The credit payment is then set to the telephony charge made for this time period.

With this modification, there could be an excessive delay between the user retrieving the Web page for which a credit payment is made and the user retrieving the next page or the user might not retrieve another page. In order to avoid making an excessive credit payment in such circumstances, the credit payment could be limited to a maximum value.

There will now be described with reference to Figure 3 the series of operations which are performed when a client computer logs on to the point of presence 18, retrieves a single Web page for which a debit is made against the telephone account of the user of the client computer, and the client computer then logs off. As a safeguard for both the user of the client computer 10 and the information provider, where a user wishes to retrieve a Web page for which his telephone account is debited, the user registers his calling line identifier with the transaction record generator 32 for this purpose. Thus, transaction record generator 32 contains a table of the calling line identifiers for telephone accounts which can be debited when a Web page is retrieved.

Referring now to Figure 3, in a step 70, the client computer logs on to the point of presence 18, in a step 71 the point of presence allocates an Internet address to the client computer 10 and in a step 72 the point of presence transmits the Internet address, calling line identifier for the client computer 10 and the log on time to the transaction time generator 32. Thus, steps 70 to 72 correspond to steps 50 to 52 described with reference to Figure 2.

Next, in a step 73, the client computer 10 requests a Web page from the server computer 16 for which a payment has to be made to the information provider. Next, in a step 74, the server computer 16 sends a request to the transaction record generator 32 to check if the Internet address is valid for debiting a telephone account.

In a step 75, the transaction record generator checks if the Internet address is valid for debiting a telephone account. In order to do this, the transaction record generator 32 firstly determines if there is a computer logged on to point of presence 18 having this Internet address. If a computer is logged on with this Internet address, it then finds the corresponding calling line identifier and then checks if the calling identifier is listed in the table of calling line identifiers which are valid for debiting telephone accounts. Then, in a step 76 the transaction record generator 32 sends a reply to the Internet server 16 stating that the Internet address is either valid or invalid for debiting a telephone account.

By way of modification, and as a security measure, where a user wishes to retrieve a Web page for which his telephone account is debited, the user registers both his calling line identifier and his password with the transaction record generator 32. With this modification, in step 72, the point of presence 18 transmits the password together the Internet address, calling line identifier and log on time to the transaction record generator 32. Also, with this modification, in step 75, the transaction record generator 32 checks the password for validity.

Next, in a step 77, the server computer 16 checks the reply from the transaction record generator 32. If the reply is that the address is not valid for debiting, in a step 78 the server computer 16 refuses the request to supply the Web page. Although not shown in Figure 3, following step 78 the client computer 10 may attempt to retrieve other Web pages or log off.

If the Internet address is valid for debiting an account, in a step 78, the server computer transmits the Web page to the client computer.

Then, in a step 79, the server computer generates an initial transaction record which specifies the amount to be debited and the Internet address of the client computer. It transmits this initial transaction record to the transaction record generator 32.

Then, in a step 80, the transaction record generator converts the Internet address to the calling line identifier. In a step 81, the transaction record generator generates a client transaction record. The client transaction record contains the calling line identifier for the client computer 10 and the amount to be debited to the user's telephone account. In a step 82, the transaction record generator 32 transmits the client transaction record to the telephone service billing system 34.

Next, in a step 83, the transaction record generator generates an information provider transaction record. This contains the amount to be credited to the account of the information provider and the name of the information provider. Then, in a step 84, the transaction record generator transmits this information provider transaction record to the information provider billing system 36.

Lastly, in a step 85, the client computer logs off and in a step 86 the point of presence 18 transmits the Internet address and log off time to the transaction record generator 32.

The transaction generator 32 calculates, at periodic intervals, the cumulative amount to be credited or debited to each information provider and transmits the amount to the billing system 34.

By way of a modification, in step 52 or step 72 the point of presence 18 can also transmit the user's identifier to the transaction record generator 32. In this modification, the transaction record generator 32 maintains a table of user identifiers and corresponding calling line identifiers which are valid for the purposes of crediting and debiting the corresponding telephone accounts. With this modification, in step 52 the transaction record generator 32 checks that the user's identifier and the calling line identifier received from the point of presence 18 are valid for debiting or crediting a corresponding telephone account. This modification would be beneficial, for example, to stop children in a household from incurring high debits against their parents' telephone account.

By way of modification steps 54 to 60 in Figure 2 or steps 79 to 84 in Figure 3 need not be performed in real-time. For example, in step 54, the server computer 16 can transmit the initial transaction record to the transaction record generator 32 several hours after the Web page is retrieved by the client computer 10 or the server computer 16 can transmit the transaction records in batches to the transaction record generator 32. Where there is a delay in transmitting the transaction records, each transaction record also contains the time at which the Web page was retrieved. For each transaction record, the transaction record generator 32 then checks that the Web page was retrieved at a time when the client computer 10 was logged on to the point of presence 18. Also, the client and information provider transaction records may be transmitted over links 40 and

42 or sent on magnetic disks or tape on a batch basis to the billing systems 34 and 36.

Referring now to Figure 4, the arrangement shown is generally similar to that shown in Figure 1 except that in this arrangement client computers are provided with permanent Internet addresses. With this arrangement, where the user of a client computer wishes to retrieve Web pages for which a credit payment is made or for which a telephone account is to be debited, the user of the client computer registers the calling line identifier for the user's telephone account and the computer's Internet address with the transaction record generator 32.

With this arrangement, when a user retrieves a Web page for which a credit payment is made, the series of operations are the same as described with reference to Figure 2 except that the calling line identifier is not transmitted in step 52. Similarly, when a user retrieves a Web page for which his telephone account is debited, the series of operations are the same as described with reference to Figure 3 except that the calling line identifier is not transmitted in Step 72. This arrangement provides the advantage that the point of presence 18 does not have to extract and transmit calling line identifiers. This arrangement also provides the advantage that the client computer can access the point of presence on any telephone line and credits and debits will be made against the user's telephone account registered with the point of presence.

In another alternative arrangement, the transaction record generator is not used. Instead, the server computer 16 generates the client and information provider transaction records. In this arrangement, when a user retrieves a Web page for which a credit payment is made to, or required from, the user's telephone account, the server computer 16 interrogates the point of presence to obtain the calling line identifier. The server computer 16 then transmits the transaction records to the billing systems 34 and 36 over communications links or sends them in batches on magnetic disks or tapes.

Although this invention has been described with reference to the public Internet, it may also be used with any data network.

CLAIMS

1. A method of providing a transaction record relating to the retrieval of information by a client computer connected to a telephone network from a server computer connected to a data network, said method comprising the steps of:

providing a connection between the client computer and the data network;

said client computer having a telephone network identifier and a data network address;

receiving credit or debit details from the server computer relating to said retrieval of information by the client computer from the server computer; and

generating a client transaction record relating to said retrieval of information by the client computer from the server computer, said client transaction record containing credit or debit details and said telephone network identifier.

2. A method of providing a transaction record as claimed in claim 1, comprising the further step of:

transmitting the transaction record to a telephone network billing system.

3. A method of providing a transaction record as claimed in claim 1 or claim 2, comprising the further steps of:

generating an information provider transaction record relating to said retrieval of information and containing credit or debit details and an identifier for the provider of said information; and

transmitting the information provider transaction record to an information provider billing system.

4. A method providing a transaction record as claimed in any one of the preceding claims, in which:

said step of receiving credit or debit details from the server computer comprises receiving an initial transaction record from the server computer

containing said credit or debit details relating to said retrieval of information and said data network address; and

said step of generating a client transaction record includes the step of converting said data network address to said telephone network identifier.

5. A method providing a transaction record as claimed in any one of the preceding claims, in which said step of providing a connection between the client computer and the data network includes the steps of:

allocating said data network address to the client computer; and

storing the data network address against the telephone network identifier.

6. A method providing a transaction record as claimed in any one of the preceding claims, comprising the further steps of:

receiving a request from the server computer to check if said data address is valid for debiting;

checking if said data network address is valid for debiting; and

sending a reply to the server computer.

7. A method of providing a transaction record as claimed in any one of the preceding claims, in which said telephone network identifier is a telephone number and said data network is the public Internet.

8. A system for providing a transaction record relating to the retrieval of information by a client computer connected to a telephone network and having a telephone network identifier from a server computer connected to a data network, said system comprising:

an interface for providing a connection between a client computer connected to the telephone network and the data network; and

a transaction record generator arranged to:

receive credit or debit details from a server computer connected to the data network relating to the retrieval of information by a client computer connected to the telephone network from the server computer; and

generate a transaction record relating to said retrieval of information by said client computer from said server computer and containing credit or debit details and a telephone network identifier.

9. A system for providing a transaction record as claimed in Claim 8, in which said transaction record generator is further arranged to:

transmit the transaction record to a telephone network billing system.

10. A method of providing a transaction record relating to the retrieval of information by a client computer connected to a telephone network from a server computer connected to a data network, said method comprising the steps of:

providing a connection between the client computer and the data network;

said client computer having a telephone network identifier and a data network address; and

generating a client transaction record relating to said retrieval of information by the client computer from the server computer, said client transaction record containing credit or debit details and said telephone network identifier.

11. A system for providing a transaction record relating to the retrieval of information by a client computer connected to a telephone network and having a telephone network identifier from a server computer connected to a data network, said system comprising:

an interface for providing a connection between a client computer connected to the telephone network and the data network; and

a server computer connected to the data network, said server computer being arranged to:

generate a transaction record relating to retrieval of information by a client computer from said server computer and containing credit or debit details and a telephone network identifier.

Fig.1.

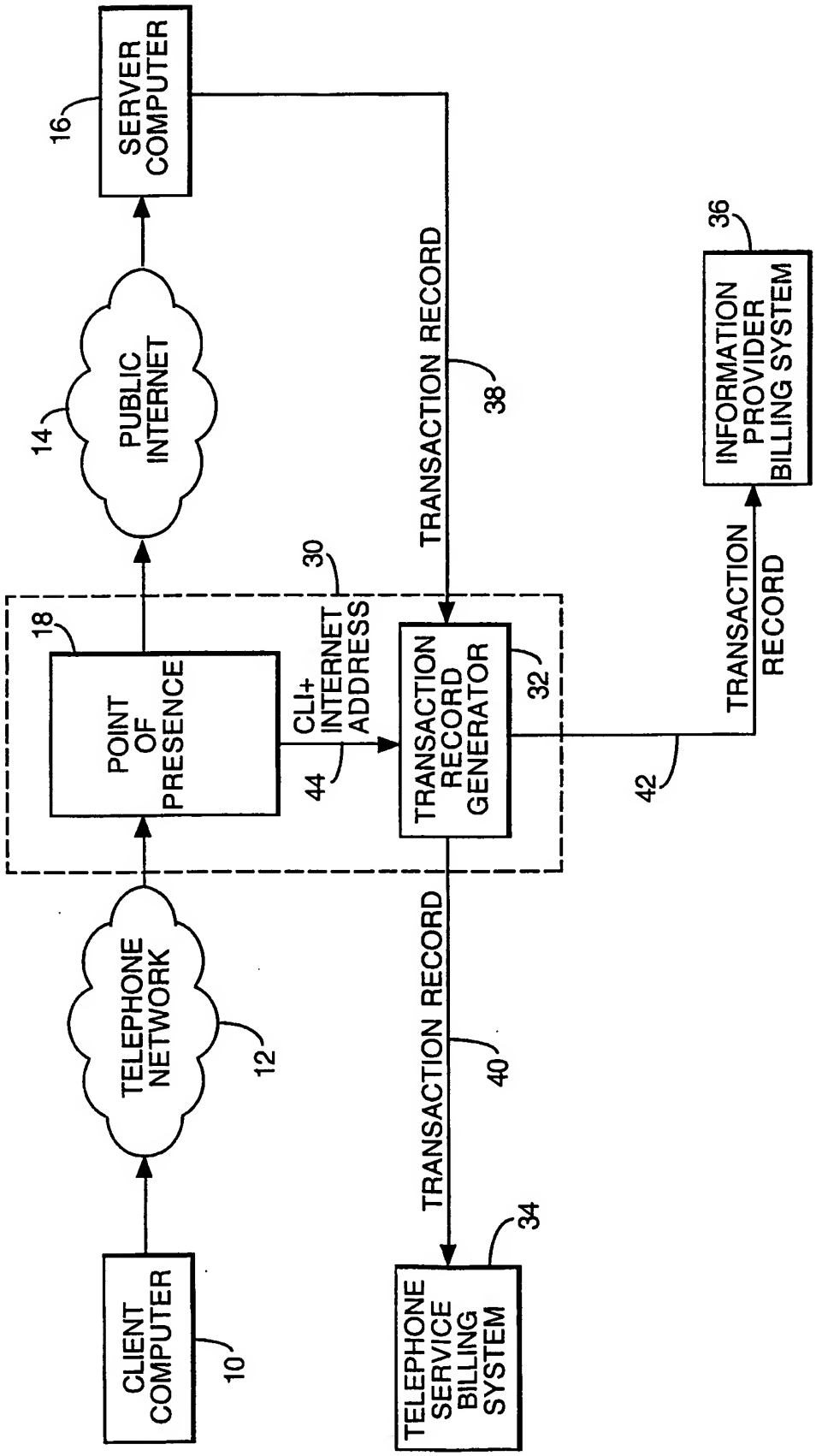

SERVER COMPUTER
16
PUBLIC INTERNET
14
TRANSACTION RECORD
38
INFORMATION PROVIDER BILLING SYSTEM
36
30
18
POINT OF PRESENCE
CLI+ INTERNET ADDRESS
44
TRANSACTION RECORD GENERATOR
32
TRANSACTION RECORD
42
TELEPHONE NETWORK
12
TRANSACTION RECORD
40
CLIENT COMPUTER
10
TELEPHONE SERVICE BILLING SYSTEM
34

Fig.2.

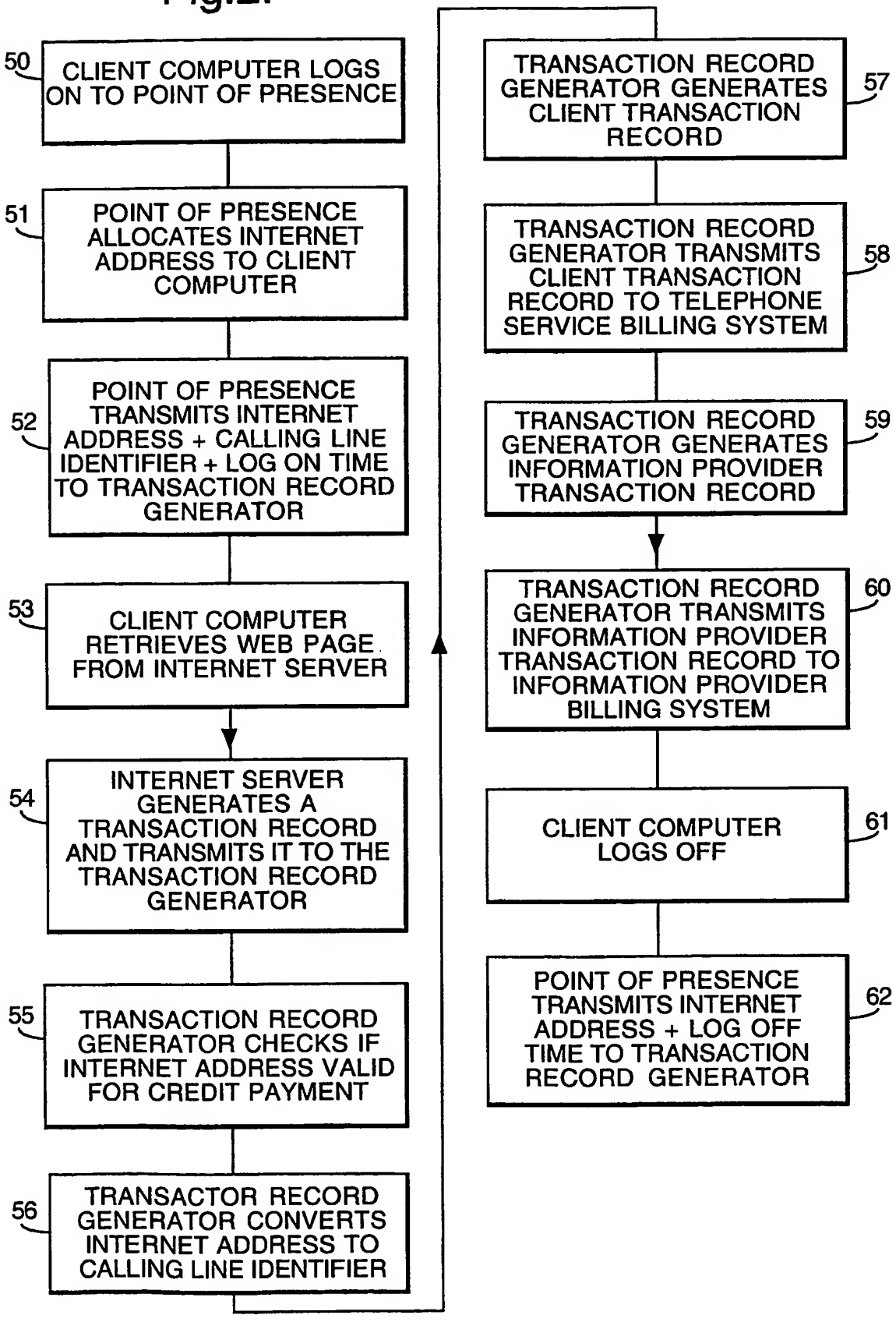

50
CLIENT COMPUTER LOGS ON TO POINT OF PRESENCE
51
POINT OF PRESENCE ALLOCATES INTERNET ADDRESS TO CLIENT COMPUTER
52
POINT OF PRESENCE TRANSMITS INTERNET ADDRESS + CALLING LINE IDENTIFIER + LOG ON TIME TO TRANSACTION RECORD GENERATOR
53
CLIENT COMPUTER RETRIEVES WEB PAGE FROM INTERNET SERVER
54
INTERNET SERVER GENERATES A TRANSACTION RECORD AND TRANSMITS IT TO THE TRANSACTION RECORD GENERATOR
55
TRANSACTION RECORD GENERATOR CHECKS IF INTERNET ADDRESS VALID FOR CREDIT PAYMENT
56
TRANSACTOR RECORD GENERATOR CONVERTS INTERNET ADDRESS TO CALLING LINE IDENTIFIER
57
TRANSACTION RECORD GENERATOR GENERATES CLIENT TRANSACTION RECORD
58
TRANSACTION RECORD GENERATOR TRANSMITS CLIENT TRANSACTION RECORD TO TELEPHONE SERVICE BILLING SYSTEM
59
TRANSACTION RECORD GENERATOR GENERATES INFORMATION PROVIDER TRANSACTION RECORD
60
TRANSACTION RECORD GENERATOR TRANSMITS INFORMATION PROVIDER TRANSACTION RECORD TO INFORMATION PROVIDER BILLING SYSTEM
61
CLIENT COMPUTER LOGS OFF
62
POINT OF PRESENCE TRANSMITS INTERNET ADDRESS + LOG OFF TIME TO TRANSACTION RECORD GENERATOR

Fig.3A.

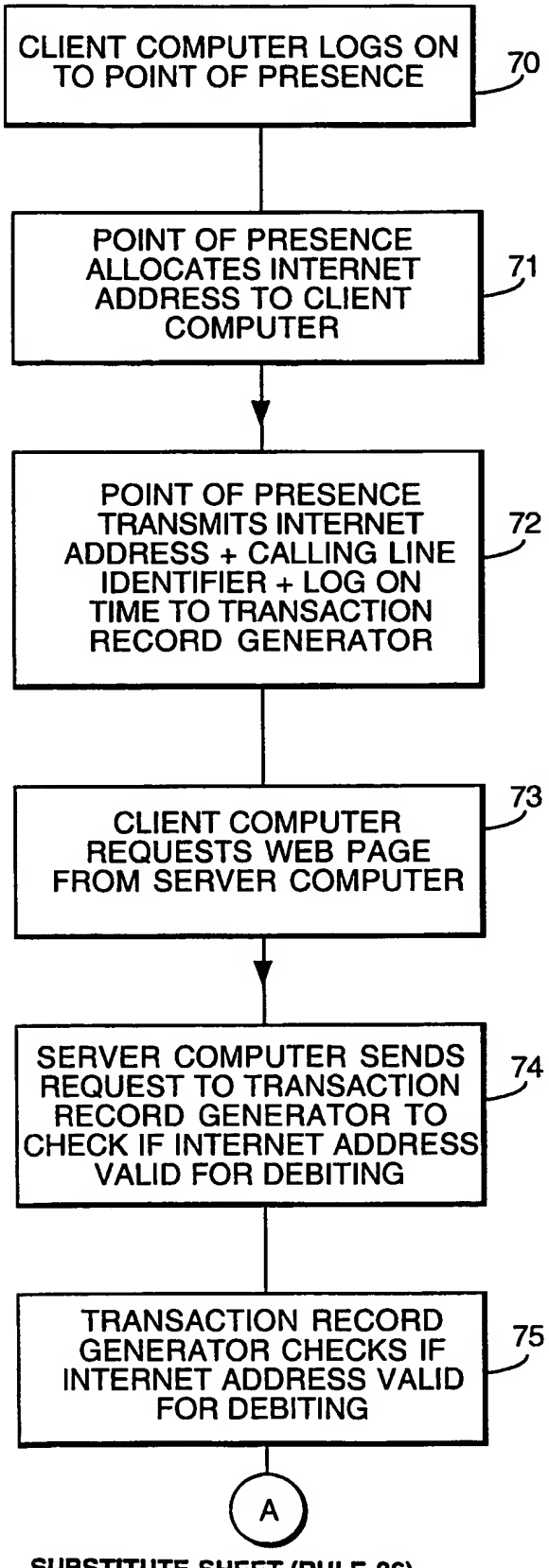

CLIENT COMPUTER LOGS ON TO POINT OF PRESENCE
70
POINT OF PRESENCE ALLOCATES INTERNET ADDRESS TO CLIENT COMPUTER
71
POINT OF PRESENCE TRANSMITS INTERNET ADDRESS + CALLING LINE IDENTIFIER + LOG ON TIME TO TRANSACTION RECORD GENERATOR
72
CLIENT COMPUTER REQUESTS WEB PAGE FROM SERVER COMPUTER
73
SERVER COMPUTER SENDS REQUEST TO TRANSACTION RECORD GENERATOR TO CHECK IF INTERNET ADDRESS VALID FOR DEBITING
74
TRANSACTION RECORD GENERATOR CHECKS IF INTERNET ADDRESS VALID FOR DEBITING
75
A

Fig.3B.

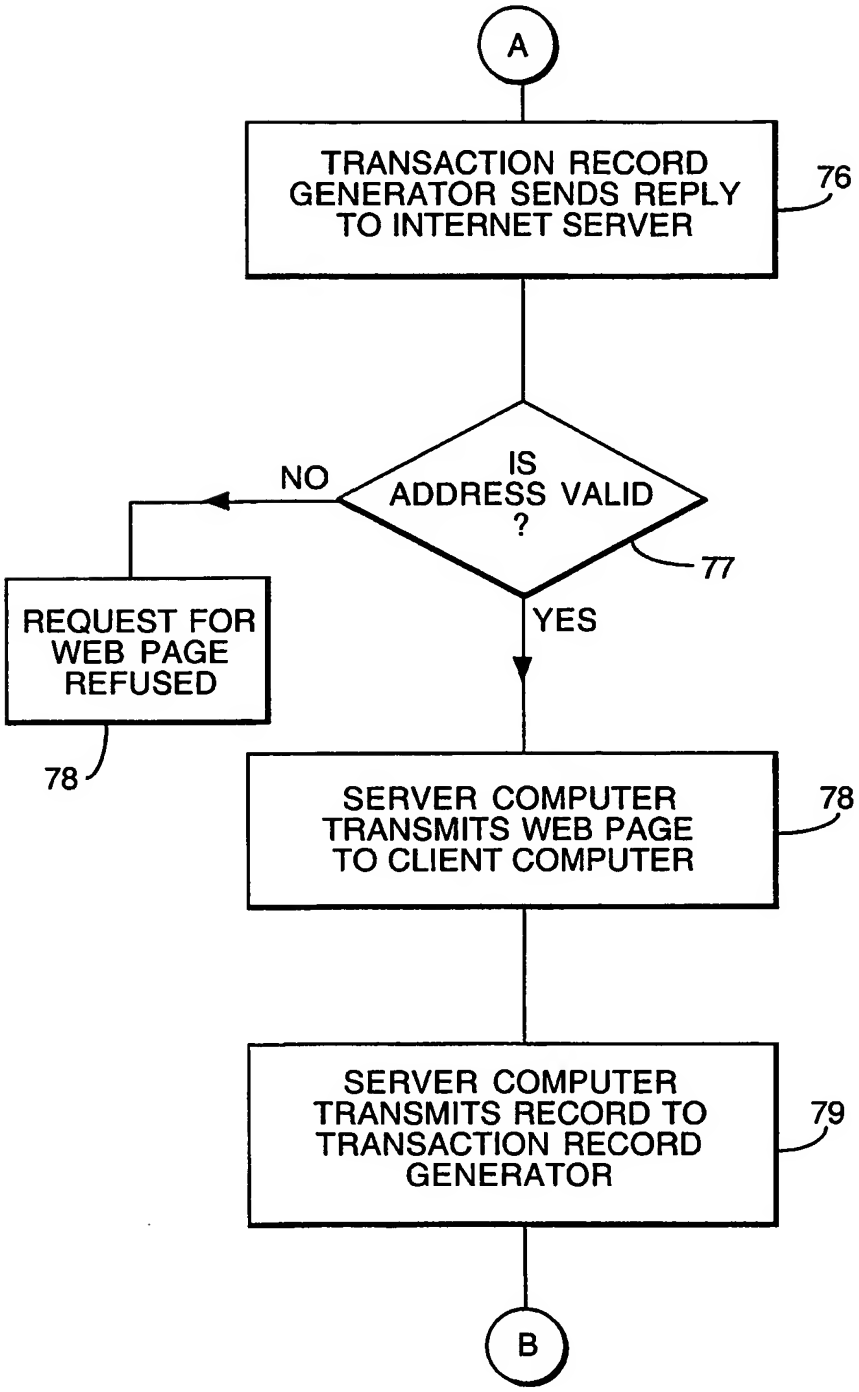
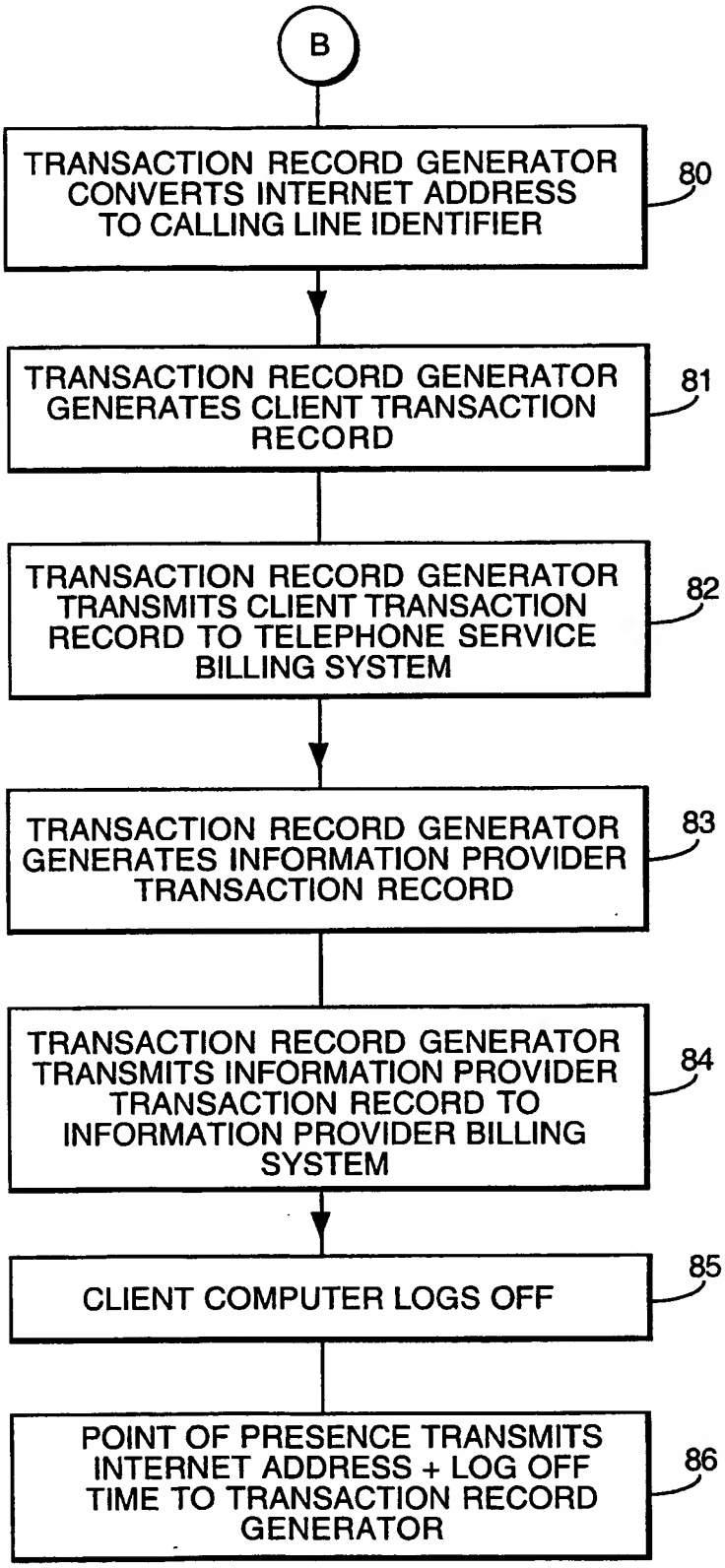

A
TRANSACTION RECORD GENERATOR SENDS REPLY TO INTERNET SERVER
76
IS ADDRESS VALID ?
77
NO
YES
REQUEST FOR WEB PAGE REFUSED
78
SERVER COMPUTER TRANSMITS WEB PAGE TO CLIENT COMPUTER
78
SERVER COMPUTER TRANSMITS RECORD TO TRANSACTION RECORD GENERATOR
79
B

Fig.3C.


B
TRANSACTION RECORD GENERATOR CONVERTS INTERNET ADDRESS TO CALLING LINE IDENTIFIER
80
TRANSACTION RECORD GENERATOR GENERATES CLIENT TRANSACTION RECORD
81
TRANSACTION RECORD GENERATOR TRANSMITS CLIENT TRANSACTION RECORD TO TELEPHONE SERVICE BILLING SYSTEM
82
TRANSACTION RECORD GENERATOR GENERATES INFORMATION PROVIDER TRANSACTION RECORD
83
TRANSACTION RECORD GENERATOR TRANSMITS INFORMATION PROVIDER TRANSACTION RECORD TO INFORMATION PROVIDER BILLING SYSTEM
84
CLIENT COMPUTER LOGS OFF
85
POINT OF PRESENCE TRANSMITS INTERNET ADDRESS + LOG OFF TIME TO TRANSACTION RECORD GENERATOR
86

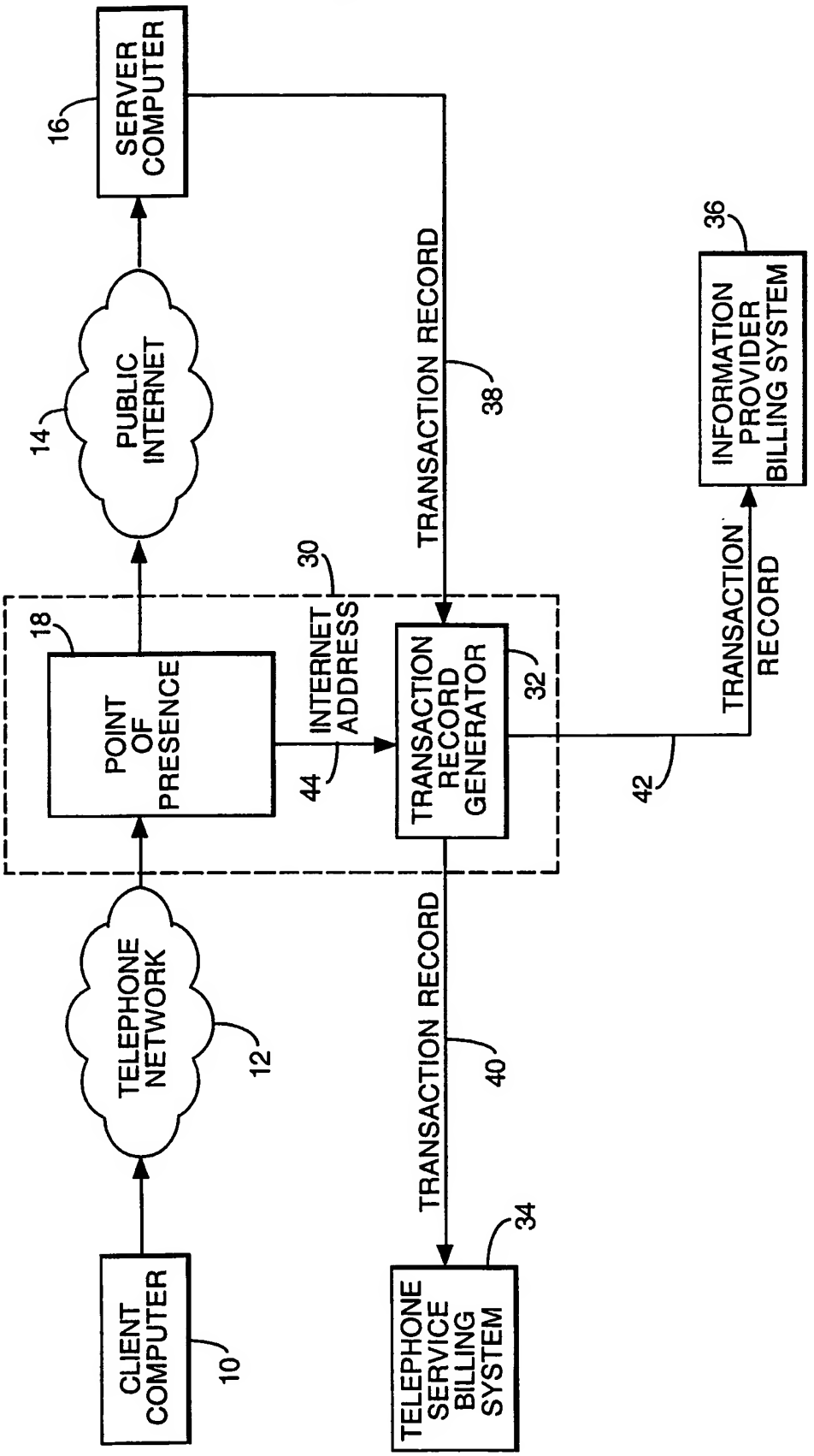

SERVER COMPUTER
16
PUBLIC INTERNET
14
TRANSACTION RECORD
38
INFORMATION PROVIDER BILLING SYSTEM
36
30
18
POINT OF PRESENCE
INTERNET ADDRESS
44
TRANSACTION RECORD GENERATOR
32
TRANSACTION RECORD
42
TELEPHONE NETWORK
12
TRANSACTION RECORD
40
CLIENT COMPUTER
10
TELEPHONE SERVICE BILLING SYSTEM
34

Fig.4.

INTERNATIONAL SEARCH REPORT

Inter nal Application No
PCT/GB 98/02327

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G07F17/16 G07F19/00 H04M17/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 G07F H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 0 618 539 A (S.I. KIM) 5 October 1994 see abstract; claims; figures see column 14, line 28 - column 15, line 23	1,3,7,8, 10,11
Y	EP 0 494 530 A (STRATEGIC TELECOM) 15 July 1992 see abstract; claims; figures	1,3,7,8, 10,11
A	US 5 602 905 A (R.P. METTKE) 11 February 1997 see the whole document	1-3,7-11
A	WO 96 08783 A (FIRST VIRTUAL HOLDINGS) 21 March 1996	

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 November 1998	08/12/1998

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	David, J

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Inter nal Application No
PCT/GB 98/02327

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 97 14118 A (SUNTEK SOFTWARE CORPORATION) 17 April 1997	

1

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter nal Application No
PCT/GB 98/02327

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0618539 A	05-10-1994	WO 9407205 A	31-03-1994
		JP 6243150 A	02-09-1994
EP 0494530 A	15-07-1992	AU 1499895 A	25-05-1995
		AU 8986091 A	16-07-1992
		CA 2058657 A	12-07-1992
		JP 5048757 A	26-02-1993
		MX 9200114 A	01-07-1992
		US 5323448 A	21-06-1994
		US 5333181 A	26-07-1994
US 5602905 A	11-02-1997	NONE	
WO 9608783 A	21-03-1996	US 5826241 A	20-10-1998
		AU 696475 B	10-09-1998
		AU 3630995 A	29-03-1996
		CA 2199942 A	21-03-1996
		EP 0791202 A	27-08-1997
		JP 10508708 T	25-08-1998
WO 9714118 A	17-04-1997	AU 7122996 A	30-04-1997
		CA 2187419 A	11-04-1997

INTERNATIONAL SEARCH REPORT

Inte .onal Application No
PCT/EP 00/05359

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G07F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G07F G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 08242 A (HUNTER PHILIP JAMES ;SEMMAKIE EAMAN (GB); BRITISH TELECOMM (GB); P) 18 February 1999 (1999-02-18) page 8 -page 12; claim 1; figure 2 abstract	1-11
X	US 5 870 456 A (ROGERS CATHERINE R) 9 February 1999 (1999-02-09) column 2, line 55 -column 3, line 31 column 5, line 7 - line 26	1-11
A	US 5 883 810 A (ROSEN DANIEL ET AL) 16 March 1999 (1999-03-16) abstract	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
8 November 2000	16/11/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Closa, D

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inta onal Application No
PCT/EP 00/05359

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9908242 A	18-02-1999	AU 8637198 A EP 1002304 A	01-03-1999 24-05-2000
US 5870456 A	09-02-1999	US 5715298 A	03-02-1998
US 5883810 A	16-03-1999	NONE	

INTERNATIONALER RECHERCHENBERICHT

Inte .onales Aktenzeichen
PCT/EP 00/05359

A. KLASSIFIZIERUNG DES ANMELDUNGSGEGENSTANDES
IPK 7 G07F19/00

Nach der Internationalen Patentklassifikation (IPK) oder nach der nationalen Klassifikation und der IPK

B. RECHERCHIERTE GEBIETE

Recherchierter Mindestprüfstoff (Klassifikationssystem und Klassifikationssymbole)
IPK 7 G07F G06F

Recherchierte aber nicht zum Mindestprüfstoff gehörende Veröffentlichungen, soweit diese unter die recherchierten Gebiete fallen

Während der internationalen Recherche konsultierte elektronische Datenbank (Name der Datenbank und evtl. verwendete Suchbegriffe)
EPO-Internal, WPI Data

C. ALS WESENTLICH ANGESEHENE UNTERLAGEN

Kategorie*	Bezeichnung der Veröffentlichung, soweit erforderlich unter Angabe der in Betracht kommenden Teile	Betr. Anspruch Nr.
X	WO 99 08242 A (HUNTER PHILIP JAMES ;SEMMAKIE EAMAN (GB); BRITISH TELECOMM (GB); P) 18. Februar 1999 (1999-02-18) Seite 8 -Seite 12; Anspruch 1; Abbildung 2 Zusammenfassung	1-11
X	US 5 870 456 A (ROGERS CATHERINE R) 9. Februar 1999 (1999-02-09) Spalte 2, Zeile 55 -Spalte 3, Zeile 31 Spalte 5, Zeile 7 - Zeile 26	1-11
A	US 5 883 810 A (ROSEN DANIEL ET AL) 16. März 1999 (1999-03-16) Zusammenfassung	1

☐ Weitere Veröffentlichungen sind der Fortsetzung von Feld C zu entnehmen

☒ Siehe Anhang Patentfamilie

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Datum des Abschlusses der internationalen Recherche	Absendedatum des internationalen Recherchenberichts
8. November 2000	16/11/2000

Name und Postanschrift der Internationalen Recherchenbehörde	Bevollmächtigter Bediensteter
Europäisches Patentamt, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Closa, D

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INTERNATIONALER RECHERCHENBERICHT

Angaben zu Veröffentlichungen, die zur selben Patentfamilie gehören

Internationales Aktenzeichen
PCT/EP 00/05359

Im Recherchenbericht angeführtes Patentdokument	Datum der Veröffentlichung	Mitglied(er) der Patentfamilie	Datum der Veröffentlichung
WO 9908242 A	18-02-1999	AU 8637198 A	01-03-1999
		EP 1002304 A	24-05-2000
US 5870456 A	09-02-1999	US 5715298 A	03-02-1998
US 5883810 A	16-03-1999	KEINE	